

**REMARKS**

Pursuant to the Examiner's request, the preamble of claim 1 has been amended to clearly indicate that the invention is directed to a thin coating film provided on a substrate.

Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by WO 97/48774 to Araki et al. The grounds for rejection remain the same as set forth in the previous Office Action.

In the "Response to Arguments" in paragraph 4 of the Office Action dated February 21, 2003, the Examiner points to Araki et al at col. 10, lines 10-22 (corresponding U.S. 6,207,236) as teaching a layer comprising as much as 85 vol% of fluorine-containing polymer particles uniformly dispersed in a metal oxide gel. In the Examiner's view, this is a layer comprising a continuous layer of polymer particles. The Examiner also points out that claim 8 is directed to an aqueous dispersion, but not to a continuous layer.

Applicants respond as follows.

Pursuant to the Examiner's suggestion in the telephone interview of February 11, 2003, claim 1 has been amended to recite that the invention is directed to a thin coating film [comprising] consisting essentially of a continuous layer of fluorine-containing polymer. The amendment to claim 1 employing the transitional language "consisting essentially of" excludes the metal oxide of Araki et al in an amount of 15% or more which materially affects the basic and novel characteristics of the claimed thin coating film. In this regard, Applicants advise as follows.

When the content of the metal oxide is 15% or more, the resulting film tends to be rigid and fragile, and the formation of a transparent thin film becomes difficult. Although not

PRELIMINARY AMENDMENT  
U.S. Application No.: 09/763,412

explicitly described in the present specification, one of ordinary skill can reasonably reach such conclusion based on the disclosure of the specification as a whole.

Moreover, Araki et al (U.S. 6,207,236) at col. 10, lines 16-19 teaches that "when an amount of the fluorine-containing polymer (A) having functional group is too much, transparency of the coating film is lowered and the coating film becomes fragile." Thus, the reference itself recognizes the difference between a coating film consisting essentially a continuous layer of a fluorine-containing polymer as compared to one containing a metal oxide in an amount of 15% (or more).

Additionally, claim 8 has been canceled, and claim 9 has been amended to depend directly from claim 1.

Entry of the amendments and allowance of claims 1-7 and 9 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

Respectfully submitted,



Abraham J. Rosner  
Registration No. 33,276

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE



23373

PATENT TRADEMARK OFFICE

Date: June 20, 2003

**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

**Claim 9 is canceled.**

**The claims are amended as follows:**

1. (Amended) A thin coating film on a substrate, said thin coating film having a thickness of less than 3  $\mu\text{m}$  and [comprising] consisting essentially of a continuous layer of fluorine-containing polymer formed by adhering directly to a substrate, said fluorine-containing polymer in the coating film having a hydrophilic functional group and a crystalline melting point of said fluorine-containing polymer being not less than 200°C.

9. (Twice Amended) A method of forming the thin coating film of Claim 1, which comprises coating [the] an aqueous dispersion [of Claim 8] on a substrate and sintering at a temperature of not less than a crystalline melting point of the fluorine-containing polymer contained therein, wherein the aqueous dispersion comprises 0.1 to 70% by weight of fluorine-containing polymer having a hydrophobic functional group in the form of fine particles having a particle size of 1 to 200 nm and 30 to 99.9% by weight of water.